



## King County

# Metropolitan King County Council Growth Management and Natural Resources Committee

### STAFF REPORT

**Agenda Item:** 4  
**Briefing No.:** 2008-B0147  
**Date:** June 17, 2008  
**Prepared by:** Kendall Moore  
Mike Reed  
Mike Huddleston  
**Attending:** Paul Reitenbach, DDES  
Harry Reinert, DDES  
Karen Wolf, Office of the Executive

### REVISED

*(substantive revisions shown in italics and underlining)*

### SUBJECT

Briefing on Executive's 2008 recommended amendments to the text and policies regarding Energy, found at Chapter 8 – Services, Facilities and Utilities, of the King County Comprehensive Plan ("KCCP"). With this briefing, all sections of Chapter 8 will have been reviewed.<sup>1</sup>

### SYNOPSIS OF KEY ISSUES

- Strong emphasis on addressing climate change
- Incorporation of an Energy Plan policies as Comprehensive Plan policies
- More aggressive policies on alternative energy resources (methane/solar)
- Recognition of changes in energy planning
- Recognition of additional costs alternatives present in relation to status quo

### OVERVIEW OF PERTINENT CHAPTER SECTIONS AND ISSUES:

The text and policies on energy are found in Section III, subpart A, at pages 8-19 through 8-28. The amendments to this portion of Chapter 8 establish an array of proposed policy initiatives that demonstrate County leadership in energy conservation. These include use of renewable fuels, conversion of waste products to energy, and seeking LEED or Energy Star certification for buildings. The subpart also emphasizes the siting of roads, lots, landscaping and buildings

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<sup>1</sup> Previously, the Committee was briefed on those subparts relating to stormwater, solid waste, wastewater, water supply, floodplain management and telecommunications.

for improved solar access, and encourages including solar electricity in new facility design and major rehabilitation, among other provisions.

Staff finds that the proposed policies generally place the County in a progressive stance with regards to leadership on energy policy. Staff has not identified specific concerns with most of these policy recommendations. However, there are a few issues, which are addressed below.

## **ANALYSIS**

1. Page 8-19, new text has been added to highlight the renewable energy use targets that the Council adopted in Motion 12362 (October 2006). To better clarify that these targets are set by Council policy, staff suggest this introduction be revised linking back to the implementing motion's language.

2. Pages 8-19 and 20: grafting energy efficiency phrasing to the text in subpart 1, which relates exclusively levels of service that utilities are to provide, seem incongruent and the addition of policy 302a relating to linking land use to countywide energy efficiency at this location is disjunctive. Executive staff has proposed deletions and revisions to text to better set up these policies. Central staff does not have concerns regarding these revisions, which are included in Attachment 1.

3. Pages 8-20 through 8-23: added to the title of this subsection is "Energy Efficiency." New text links the impacts of climate change to energy usage, as well as identifies other negative ramifications of a status quo energy usage. The new text relies heavily on an "Energy Plan." Central staff presumed that it was the February 2007 draft plan produced by the Executive in response to Motion 12362. However, recently, Executive staff stated that this section is actually linked to an "updated" energy plan that is currently being prepared by the Executive. As noted in previous briefings, the Council has not taken any formal action on the Energy Plan published in February 2007 and has not been advised previously that the energy policies and text in the Comprehensive Plan referencing an "Energy Plan" was not the draft promulgated in February 2007. With this new wrinkle, consideration of the new energy plan and its ramifications should be reviewed before inclusion of specific policies or goals of that new energy plan.

Executive staff agree that this evolution of the energy plan can cause confusion and have agreed to editorial changes including removal of text at page 8-20 that confuses what energy plan the text is referencing. The same editorial deletion is also recommended at page 8-21.

4. Pages 8-21 and 8-22, the new text proposed for the new energy efficiency policies acknowledges that implementing these policies can at least in the short run be more expensive than traditional power sources. However, it is suggested that over the life cycle and taking into consideration the benefits of reducing climate change impacts, a coordinated, strategic approach to energy management, which may be more costly than the current approach to energy use, is required.

5. **F-302b** focuses on use of clean, renewable and alternative fuel and energy technologies.

<b>F-302b</b>	<b><u>King County should foster the development and increased use of clean, renewable and alternative fuel and energy technologies. Promising technologies include, but are not limited to: biodiesel, hydrogen, and increased electrification.</u></b>
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**ISSUE:** Based on the current controversy relating to biodiesel, staff would only point out that it is included as a promising technology.

6. **F-302e** recommends converting waste to energy, particularly methane gas generated from the county's solid waste disposal facility, and from the treatment of wastewater.

<b>F-302e</b>	<b><u>King County shall convert to energy 100 percent of all reasonably usable waste products, including methane gas generated from the operation of its landfill and wastewater treatment plants, consistent with policy E-206. King County shall claim rights to any and all renewable energy and greenhouse gas reduction attributes associated with these facilities.</u></b>
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**ISSUE:** Staff recommends rewording this policy to focus explicitly on methane capture, to avoid potential for reading it to mandate incineration of the County's municipal solid waste stream. While waste incineration is an option the County may choose at the appropriate point, the current solid waste policy planning process assumes retaining the breadth of options, and avoiding commitment to any single direction, pending completion of the Solid Waste Comprehensive Plan.

An option would be to tie it back to the definitions found in I-937 (codified at RCW 19.285 et al.)

**King County shall support the conversion of renewable resources ((convert)) to energy ((100 percent of all)) for reasonably usable waste products, including methane gas generated from the operation of its landfill and wastewater treatment plants, consistent with policy E-206. Renewable resources shall include those sources listed in RCW 19.285.030(18), now and as may be amended. King County shall claim rights to any and all renewable energy and greenhouse gas reduction attributes associated with these facilities.**

7. **F-302f**, found at p. 8-21, is an encapsulation of the first five actions to implement the 2007 Energy Plan's third goal. **F-302g, h and i** are verbatim from pages 16 and 17

of the 2007 Energy Plan relating to LEED certification and using STAR rated appliances.

**ISSUE:** Is it the Committee's desire to incorporate into this four-year Comprehensive Plan the actions to implement the goals from the 2007 Energy Plan? In light of the fact that Executive staff recently advised central staff that the Executive is completing a rewrite of the Energy Plan, quoting from that plan may be inappropriate. Working with Executive staff, these policies were re-written to avoid linking only to LEED and STAR since over the course of the next four years, these certifications may be eclipsed by new rating systems. See Attachment 1. Central staff has no concerns regarding the revisions, except that with respect to F-302h where it mandates all County construction be LEED certified. As is being contemplated in the Green Building Ordinance (Proposed Ordinance 2008-0107) or "GBO," there may be situations where costs prohibit achieving LEED certification. Central staff will work with Executive staff to address this issue.

Additionally, as it is now being proven that the Energy Plan is not a four year document, referencing an "Energy Plan," with the caveat that it must be reviewed and considered by the Council may be the better approach. Thus, as the energy efficiency industry evolves and energy goals or actions are revised; the Energy Plan can be amended to address the changes in this volatile area, whereas the Comprehensive Plan is not then in out of date.

8. In text at the top pf page 8-22,<sup>2</sup> it appears that the Executive is proposing a new methodology to budget for efficient energy programs. While this is only text and therefore does not have the force of policy, it nevertheless includes budgetary processes considerations.

**ISSUE:** The Council is already considering how to budget and track life cycle costs for these types of projects in the Green Building Ordinance. Central staff recommends that this language be deleted and the implementation of how these energy efficiency programs may be evaluated and funded be governed by that Ordinance.

9. **F302j**, found at page 8-22 flows from the above text that central staff recommends be deleted, as it is understood that the Green Building Ordinance will be establishing the funding and tracking mechanisms called in this policy to be created.

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<sup>2</sup> Many energy efficiency, conservation and renewable energy projects have been deferred or not implemented due to lack of funds, despite their benefits and financial indicators. The value of energy projects are often at a disadvantage because they require capital outlay up-front to reduce operating costs over the project lifetime, and are rejected even though the projects could be effectively self-funding using standard discount rates on capital funds. One problem is that the capital and operating budgets are separate and competing parts of county finance, with laws separating their accounting. In order to meet aggressive climate change mitigation and energy efficiency goals, a commitment to substantial ongoing investment in energy saving projects will be required. Using modern life-cycle cost analyses and other methods, we can develop credible and widely accepted criteria to evaluate energy projects and determine if overall lifetime benefits are greater than their costs. Standardized financing rules and mechanisms (such as 3<sup>rd</sup> party energy performance contracting or even "energy conservation bonds") for such qualified projects used in the budget process should greatly increase the likelihood of projects being funded.

10. Both in text and in new policy (**F-306b**), page 8-23, the use of solar energy systems are encouraged.

11. Found at page 8-23, subsection 3, “Electrical Utilities,” includes new text describing the significant events in the electrical industry that have affected King County over the last several years.<sup>3</sup> Only one policy is changed in this subsection, F-308, adding climate change impact considerations and use of renewables as relevant to electrical power generation. However the tenor of this policy is changed from King County continuing to participate in the licensing of “small hydroelectric projects” to only participating in licensing of “significant power generation projects.” It is unclear the reason for this change. Central staff is working with Executive staff for clarification.

12. For the Natural Gas subsection, there is a new policy F-313a. The policy, at page 8-26, is directed to promote the use of methane gas generated by King County operations. Central Staff is working with Executive staff on wordsmithing the policy to more clearly articulate its intent.

Attachments:

1. matrix

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<sup>3</sup> The need to include item 3 (recognition of human-caused climate change, driven mostly by carbon dioxide release—a significant portion of which can be attributed to electric power generation) is questioned as most of the pacific Northwest’s electrical power is hydro-generated.

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<p>At page 8-19:</p> <p><u>In 2006, the King County Executive implemented a suite of four Climate Change Initiatives: Land Use, Transportation, Environment, and Renewable Energy:</u></p> <ul style="list-style-type: none"> <li>• <u>50 percent of King County's non-transit energy use to come from renewable resources by 2012;</u></li> <li>• <u>35 percent of King County's transit energy use to come from efficiencies and renewable sources by 2015; and</u></li> <li>• <u>50 percent of King County's transit energy use to come from efficiencies and renewable sources by 2020.</u></li> </ul> <p><u>These goals will provide the framework for energy planning in King County facilities for the next 4 years and beyond.</u></p>		<p>6/11 staff suggests revision to text to better reflect parameters of policy set by motion 12362.</p>
<p>6/11 exec proposal - new text in front of existing policy :</p> <p><u>Disruption of traffic due to public and private road projects frequently occurs in King County. Policies in this chapter support existing programs to notify utilities of upcoming projects to build, expand, or maintain county roads so utility and road construction can be coordinated. Distribution systems for gas, electric and telecommunications installation in new construction now have separate permits. Permit consolidation is desirable as a means to expedite review while protecting the environment. Countywide Planning Policy ED-23 encourages jurisdictions to establish a master utility project.</u></p> <p><b>F-302 King County should coordinate public road construction and maintenance projects with utility construction and maintenance.</b></p>		<p>To address central staff's concerns that these policies seemed disjointed, executive staff rewrote introductory language that sets the policies up better for understanding.</p>
<p>6/11 exec proposal for new text in front of proposed policy:</p> <p><u>Appropriate planning, such as increased housing density, transit-oriented development and walk-to-work housing can significantly reduce regional energy use over time. Similarly, land use regulation can support increased availability and use of renewable energy. For example, consideration of solar access in land use codes and building siting can increase the potential for solar energy use. Policies in this chapter encourage such energy-conscious development.</u></p> <p><u>F-302a King County should encourage land uses</u></p>	<p>Incorporates consideration of energy and climate issues into land use planning, consistent with new County energy and climate change mitigation policies, including Executive Order PUT 7-6 (AEO), and Council Ordinance Motion 2006-0328.2</p>	<p>Incongruent with section A.</p> <p>6/11 rewritten by exec staff with deletion in policy</p>

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and development that will improve <del>((countywide))</del> energy efficiency, and should support the expansion of renewable energy resources through development regulations, prudent variances and active incentive programs when the benefits of doing so outweigh the costs.		
F-302b <u>King County should foster the development and increased use of clean, renewable and alternative fuel and energy technologies. Promising technologies include, but are not limited to: biodiesel, hydrogen, and increased electrification.</u>	Makes Comp Plan consistent with Executive Order PUT 7-6 (AEO) and Council <del>Ordinance</del> Motion 2006-0328.2 to provide leadership increasing use of non-polluting renewable energy sources.	
F-302c <u>King County shall:</u> a. <u>Continue to increase the use of renewable fuel in and the efficiency of county buses and vehicles, and shall support testing of plug-in-hybrid electric vehicles where appropriate.</u> b. <u>Consistent with policy E-202, collaborate with other local governments regionally, nationally and internationally to develop a common approach to accounting for the greenhouse gas emissions resulting from the operation of its public transportation system, and for claiming rights to any greenhouse reduction attributes associated with its operation.</u>	Incorporates county transportation energy and climate change mitigation policies enacted through Executive Order PUT 7-6 (AEO) and Council <del>Ordinance</del> Motion 2006-0328.2. into Comp Plan. Recognizes the need for King County and other leading transit agencies to develop and support common methods for documenting and claiming emissions and related climate impacts reduction from operating transit systems.	
F-302d <u>King County shall maximize practical applications of electricity and heat production from renewable resources.</u>	In support of its environmental, long-term sustainability and energy security goals, King County will provide leadership by shifting to the use of renewable resources, consistent with Council <del>Ordinance</del> Motion 2006-0328.2. and Executive Order PUT 7-6 (AEO).	
F-302e <u>King County shall convert to energy 100 percent of all reasonably usable waste products, including methane gas generated from the operation of its landfill and wastewater treatment plants, consistent with policy E-206. King County shall claim rights to any and all renewable energy and greenhouse gas reduction attributes associated with these facilities.</u>	Conversion of waste products to energy is generally very good policy, both reducing county waste quantities and providing a relatively low cost local source of energy with low environmental impacts. Many waste-to-energy (W-t-E) sources available to the county also produce greenhouse gas neutral energy supply which the county wants, to meet its climate goals. Challenges associated with exploiting W-t-E include relatively high capital costs and emissions permitting as well as "NIMBY" attitudes of local residents. When producing GHG-neutral energy, the county should always seeks emission avoidance credit rights	Suggest revision: King County shall <u>support the conversion of renewable resources ((convert)) to energy ((100 percent of all)) for reasonably usable waste products, including methane gas generated from the operation of its landfill and wastewater treatment plants, consistent with policy E-206. Renewable resources shall include those sources</u>

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		listed in RCW 19.285.030(18), now and as may be amended. King County shall claim rights to any and all renewable energy and greenhouse gas reduction attributes associated with these facilities.
<p>F-302f <u>King County shall develop and adopt strategic energy management, efficiency and conservation programs in its own operations, including:</u></p> <ul style="list-style-type: none"> <li>a. <u>Consolidated energy accounting of county facilities to establish baseline energy performance for the county, benchmarking of facilities against comparable best practices where possible, setting goals for facility efficiency improvements, and measuring and reporting progress toward county energy goals;</u></li> <li>b. <u>Energy efficiency audits of all significant county facilities and the creation of a prioritized action plan for reducing energy use at such facilities;</u></li> <li>c. <u>Energy management plans for energy-intensive or special-purpose county facilities such as wastewater treatment plants, correctional facilities and transit bases that focus on least-cost management and that include specific approaches for each facility's use, as well as the production and sale of energy where appropriate;</u></li> <li>d. <u>Mandatory energy efficiency and resource use guidelines for operation and maintenance of all county-occupied facilities, while recognizing the unique operating requirements of specialty facilities;</u></li> <li>e. <u>Programs to encourage employees to implement energy conserving measures at work; and</u></li> <li>f. <u>Incentives, including retaining a portion of energy cost savings, to county agencies and departments for achieving energy efficiency.</u></li> </ul>	<p>King County's has been working consistently for years to improve energy efficiency in its facilities and conserve energy. Recently the county has substantially increased its emphasis on the need to reduce energy use in facilities as a part of sustainability and climate change mitigation policies, notably through Council <del>Ordinance</del> Motion 2006-0328.2. and Executive Order PUT 7-6 (AEO).</p> <p>In order to achieve continuous reductions in energy use and the related reductions in GHG releases from county facilities, a directive to implement a long-term strategic approach to energy management, efficiency improvement and transition to sustainable resource supplies is needed. Policy proposal F-302f lays the expectation of and foundational directives for a county-wide energy efficiency program development and implementation.</p>	<p>Amalgamation of existing actions 1-5 from 2007 energy plan- good example of linking performance to actual measurement standards</p>
<p>F-302g <u>King County should benchmark all applicable county buildings using the ENERGY STAR benchmarking tool, and shall apply for LEED Existing Building (LEED EB) and/or ENERGY STAR</u></p>	<p>Benchmarking facilities is an important method to determine their relative energy efficiency performance. EPA's Energy Star program has the largest and easiest to use building energy</p>	<p>6/11302 g-i to be rewritten by exec staff to eliminate restriction to only STAR and LEED. See</p>



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<p><u>certification on all qualifying existing county buildings.</u></p> <p>Exec 6/11 proposal: King County should benchmark all applicable county buildings <del>((using the ENERGY STAR benchmarking tool, and shall apply for LEED Existing Building (LEED EB) and/or ENERGY STAR certification on all qualifying existing county buildings))</del> as a basis for measuring energy efficiency improvements.</p>	<p>benchmarking system, which is also compatible with King County's energy database</p>	<p>attachment 2</p>
<p><u>F-302h King County shall achieve LEED certification on all new county construction.</u></p> <p>Exec 6/11 proposal:  King County shall achieve LEED certification on all new county construction. <u>For project types ineligible for LEED certification, the county should consider future energy conservation when designing the project.</u></p>	<p>Makes the Comprehensive Plan Consistent with the County Green Building Ordinance 15118, supporting LEED.</p>	<p>Central staff still have concern regarding this rewrite as it may conflict with GBO.</p>
<p><u>F-302i King County shall purchase only ENERGY STAR-labeled appliances and equipment (or equipment with equivalent or better efficiency) where available and shall require consideration of energy efficiency in all procurement decisions as an element of determining the lowest price bids.</u></p> <p>Exec 6/11 proposal:  King County <del>((shall))</del> should purchase only <del>((ENERGY STAR-labeled))</del> appliances and office equipment <del>((or equipment with equivalent or better efficiency))</del> (such as ENERGY-STAR labeled equipment) where available and shall require consideration of energy efficiency in all procurement decisions as an element of determining the lowest price bids.</p>	<p>Setting standards that the county purchase only more efficient products is an important part of improving county overall energy efficiency in operations and consistent with existing environmental purchasing goals</p>	
<p><u><del>F-302j King County shall define standardized qualifying and funding mechanisms for energy efficiency and renewable energy projects that support continued aggressive implementation of energy projects.</del></u></p>	<p>Currently, energy efficiency, renewable energy development and other energy capital improvement projects are typically included as parts of other capital project budgets or as standalone capital budget authorizations on a piecemeal basis. Operating efficiency improvements are simply folded into regular operations and rarely budgeted at all. Ongoing regular budget authorization for these projects is often compromised as a result of other priorities, even though properly designed energy projects are</p>	<p>Staff suggests deleting this and the introductory paragraph at page 8-22 as the standards for qualifying and funding these projects found in GBO.</p>

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	<p>a policy priority for the County and have attractive cost/benefit in lifecycle-cost analyses.</p> <p>To ensure that the county can continue to improve its energy efficiency and increase renewable energy utilization as directed in Council Ordinance 2006-0328.2. and Executive Order PUT 7-6 (AEO), better energy project financial qualification standards are needed, along with a streamlined energy project budgeting process. County staff must work in collaboration with the Budget Office, County Council and the Executive Office to develop mutually agreed-on methods to achieve more aggressive funding of appropriate energy projects.</p>	
F-305	<p>King County shall continue to explore <u>and develop productive uses for and</u> <del>((methods of reusing or))</del> marketing of methane gas from its sewage treatment plants and <del>((shall explore the feasibility of expanding these methods to the methane gas produced at its))</del> landfills <u>where appropriate.</u></p>	<p>Updates language in this policy to current county energy development situation</p>
F-306	<p>King County encourages the use of solar energy and should <del>((protect solar access))</del> <u>establish programs to encourage the siting of roads, lots, landscaping and buildings for improved solar orientation; the use of passive solar design and active solar technologies; and the protection of solar access.</u></p>	<p>A necessary first step to increased use of solar energy is for the local governments and land-use regulator to create policies that encourage design of solar-oriented infrastructure, and consider and encourage protection of solar access.</p>
F-306b	<p><u>King County should consider passive and active solar energy collection systems in all new facility designs and major rehabilitations. Solar electric generation systems interconnected with local utilities should be employed where triple-bottom-line cost-benefit analysis shows net benefits, considering emergency power potential and capitalizing on utility net-metering and power production credit programs.</u></p>	<p>Recognizing that solar energy is a ubiquitous and effective energy supply for distributed applications that is rapidly gaining acceptance worldwide, King County needs to incorporate evaluation of integrating solar systems in new and rehabilitated buildings as a matter of course, using best practice life-cycle cost assessment, including all incentives available.</p>
F-308	<p>To address the cumulative effects of multiple energy facilities, King County should continue to participate in the licensing and relicensing processes for all existing and proposed <del>((small hydroelectric))</del> <u>significant power generation projects within King County.</u> Individual project reviews should address consistency with designated land uses and environmental protection goals.</p>	<p>Suggest removing "significant" because of the dichotomy of moving from "small hydro" to "significant power"</p>

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<p>Specifically, <del>((hydroelectric))</del> <u>power generation</u> projects should:</p> <ul style="list-style-type: none"> <li>a. <u>Have climate change impacts considered and mitigated to the greatest extent practical;</u></li> <li>b. <u>Be consistent with, and preferably directly incorporated in, utility integrated Resource Plans;</u></li> <li>c. <u>Use renewable resources to the greatest extent practical;</u></li> <li>d. <u>Engage public process to the greatest extent possible;</u></li> <li>e. Not significantly interfere with commercial forestry operations;</li> <li>f. Be located and operated in a manner such that impacts to salmonid fish and wildlife are minimized;</li> <li>g. Avoid unstable and erosion-prone areas;</li> <li>h. Include performance bonding to fund erosion control;</li> <li>i. Provide full mitigation for construction and operation impacts;</li> <li>j. Avoid, to the extent practicable, diminishing scenic values; and</li> <li>k. Incorporate adequate public safety measures.</li> </ul>	<p>acquisitions are now guided under law in Washington by an Integrated Resource Planning (IRP) process. For these reasons, the county needs to actively engage in all stages of significant energy facility siting processes as a stakeholder representing its population to ensure its Climate Change Mitigation and Energy Goals are supported.</p>	
<p><u>F-313a King County will provide leadership in and promotion of the use of biologically-sourced methane fuel gas with no GHG impacts, including that from its own sources, as a substitute for fossil-sourced natural gas where practical.</u></p>	<p>As the largest producer of biogas from waste in the region, recognizes and encourages continuation of King County's role as a leader in developing such greenhouse gas-neutral energy resources as a replacement for fossil-sourced gas, consistent with Executive Order PUT 7-6 (AEO)</p>	<p>No issue</p>